



COLORADO

**Center of Excellence for Advanced
Technology Aerial Firefighting**

Department of Public Safety

Small Unmanned Aerial Systems in Public Safety Summit

Mt. Princeton Hot Springs Resort

Nathrop, CO

March 15-16, 2017



OPEN for Business
Chaffee County
Economic Development Corp.





COLORADO

Center of Excellence for Advanced Technology Aerial Firefighting

Department of Public Safety

Welcome! Thank you for attending the Small Unmanned Aerial Systems in Public Safety Summit cohosted by the Center of Excellence for Advanced Technology Aerial Firefighting and the Chaffee County Economic Development Corporation.

Our goal for the next two days is to give public safety practitioners an understanding of the capabilities of this emerging technology and practical tips to help stand up an sUAS program in your agencies. You will witness live demonstrations to see how the sUAS are deployed, what data they collect, and environmental concerns that may impact an agency's ability to fly the mission.

As you can see from the agenda, this Summit encourages public safety agencies to take a proactive approach to understanding the capabilities, limitations, and policy concerns of sUAS before deciding whether or not to pursue an agency program. While the Center of Excellence has many resources to help answer these questions and guide agencies toward solutions, we are not experts on counter-UAS technology or law enforcement actions against UAS operators who are flying illegally. For these questions, we will defer to the experts, including our partners within local government, the Colorado Department of Public Safety, and the federal government.

Please take time to visit with your colleagues and exchange ideas. Stop by our vendor booths to learn about their exciting products and to help them understand the public safety perspective. We hope you will join us at our Night on the Town networking event to see more of this beautiful area.

Finally, I would like to thank all of the folks who worked hard to make this Summit a reality. The Chaffee County Economic Development Corporation, Town of Buena Vista, City of Salida, Mount Princeton Hot Springs Resort, and the entire Center of Excellence team partnered together to support this event. We hope that you leave with new information, greater perspective, and excitement for the possibilities surrounding the use of sUAS in public safety.

Sincerely,

Melissa Lineberger
Center of Excellence Director

Wednesday, March 15

0700-0800	Registration and Breakfast with Vendors	
0800-0820	Welcome	
0825-0925	Air-Land-Water—AFD Red Team	Assistant Chief Richard Davis and Coitt Kessler
0930-1000	SAR and LEO - Operational Successes and Lessons Learned	Douglas Spotted Eagle
1000-1015	Break	
1015-1045	DOI UAS and Fire Applications]	Steve Stroud
1050-1120	sUAS Successes in Public Safety Panel	Steve Stroud, Richard Davis, Coitt Kessler, Douglas Spotted Eagle,
1125-1155	LTE and Drones : “Taking the bandwidth where you need it”	Dr. Harvey Gates
1200-1300	Lunch with Vendors	
1300-1645	Demonstrations	
1645-1700	Closing Remarks	
1700-1800	Happy Hour with Vendors at Mount Princeton	
1800-2130	“Night on the Town” Event	The Lariat in Buena Vista

Thursday, March 16

0730-0810	Breakfast with Vendors	
0810-0820	Welcome Back	
0825-0925	Which platforms and sensors are right for you?	Garrett Seddon and Bob Gann
0930-1000	Part 107 vs. Certificate of Authorization for the Public Safety UAV Program.	Matt Sloane
1000-1015	Break	
1015-1115	A Perspective on Drones in Public Safety by one of its Pioneers	Benjamin Miller
1120-1200	Launching your sUAS Program Panel	Benjamin Miller, Matt Sloane, Adam Trojanowski
1200-1300	Lunch with Vendors	
1300-1645	Demonstrations	
1645-1700	Closing Remarks	

Assistant Chief Richard Davis

Assistant Chief Richard Davis is the creator and executive sponsor of the Austin Fire Departments Robotics Emergency Deployment (RED) team. Chief Davis joined the Austin Fire Department in 1992. In 2009, he was appointed to the rank of Assistant Chief. During the course of his 24 years in AFD, he has managed several divisions, including Medical Operations, Wellness, Fire Prevention, Investigations, Wildfire, Recruiting, Human Resources, and overseeing our Fire Cadet Academy. In 2013, while enrolled in the Executive Fire Officers (EFO) program at the National Fire Academy, Chief Davis evaluated the concept of utilizing Unmanned Aerial Vehicles (UAVs) in emergency formats. This research has allowed him to investigate the practicality of utilizing UAVs and other robotics during emergency response. He took part in the IAFC unmanned aircraft systems task force to ensure that the fire and emergency services are properly represented in the development of policy, procedures, tactics, and technology in the rapidly evolving area of unmanned aircraft systems (UAS) at the federal, state, local, and tribal levels.



Chief Davis holds a Master's of Science degree in Executive Fire Service Leadership, a Bachelor of Science degree in Management/Marketing, and an Associate of Science degree in Logistics Management. In addition, he is a graduate of the National Fire Academy's Executive Fire Officers Program. In 2016, he was vetted and approved to receive the Chief Fire Officer's designation from the Center for Public Safety Excellence. Chief Davis is an eight-year veteran of the United States Air Force and served during the Gulf War in support of Desert Storm and Desert Shield; he continues wearing two uniforms, serving his country as a military reservist while a member of AFD.

The RED Team has been researching the use of robotics in various emergency scenarios since 2014. We have evaluated unmanned ground, water-borne, and aerial vehicles for use in various emergency operations, including not limited to fire response, confined spaces, structural collapses, hazardous material events, and search and rescue. In 2016, the RED Team program won the Texas Fire Chief Association's Lone Star Achievement Award for the "implementation of an innovative and progressive program that enhances their community's fire and life safety service delivery."

Coitt Kessler

Firefighter Coitt Kessler is the Program Manager for the Austin Fire Department's Robotic Emergency Deployment (RED) Team and is assigned to the AFD Special Operations Division and has 16 years of departmental service. Firefighter Kessler is also a founding member and Master Instructor for the IAFF's Fire Ground Survival Program, Chairperson for Local 975's IAFF Wellness Fitness Initiative Committee, founding member of the Emergency Service Pipes and Drums Association (ESPADA), and proudly served our country for eight years with both the US Army and US Coast Guard. Coitt also represents first responders as a contributing member of an advisory group for the National Institute of Standards and Technologies (NIST) on Standard Test Methods for Response Robots, is a work group member for the Public Safety Aviation Accreditation Commission for training and accreditation for UAS, and has recently contributed to the 2017 Congressional roadmap for unmanned systems.



Douglas Spotted Eagle

Douglas is a primary instructor and industry consultant for Sundance Media Group, Inc. and VASST, authoring several books and DVDs and serving as an advisor and guide for videographers, software manufacturers, and broadcasters. Skydiving since 2006 and instructing UAS since 2012, Douglas is an accomplished aerial photographer who thrives in the adrenaline-filled world of fast-action videography. Appointed as a Safety and Training Advisor in the aviation world, he is a risk management/mitigation subject matter expert. Douglas is an audio and imaging pro with numerous awards for his productions; with an intimate knowledge of the FAA FARs and FSIMs, Douglas's vision is to incorporate his years of imaging and aviation experience into best-practices for everything drone/UAV/UAS. Douglas is a frequent speaker and consults on UAV cinematography, commercial and infrastructural UAV applications, UAV risk management, night UAV flight, aerial security systems, and 107 training to ensure that pilots clearly understand the FAA laws.



Steve Stroud

UAS Aviation Safety Inspector, U.S. Department of the Interior

Steve Stroud started his career in wildfire out of high school in 1995 with the Salt Lake County Fire Department. Steve worked on hand crews, engines, fuels crews, and a helicopter rappel crew before relocating to Boise in 2003 to work with the Boise BLM Smokejumpers. Steve has always been interested in R&D and eventually became the Loft Manager for the Smokejumpers and is certified as an FAA Certified Master Rigger. As the Loft Manager, Steve spent a lot of time working with vendors and contracts to obtain new and innovative equipment for the Smokejumper community. Steve has an extensive history in developing and delivering fire training in a variety of functions. He has been actively involved in UAS operations with the BLM in the National Aviation Office. Steve recently started a position as a UAS Aviation Inspector/Fleet Manager at the Office of Aviation Services for the Department of the Interior. With his operational fire experience, including being a qualified Air Tactical Group Supervisor, he will continue to integrate UAS into wildland fire operations. Steve will also be assisting in the development of various contracts for UAS services and fleet management issues.



Dr. Harvey Gates

ADJUNCT PROFESSOR

Department of Aerospace Engineering Sciences, Interdisciplinary Telecommunications Program, and the Research and Engineering Center for Unmanned Vehicles University of Colorado at Boulder

CONSULTANT

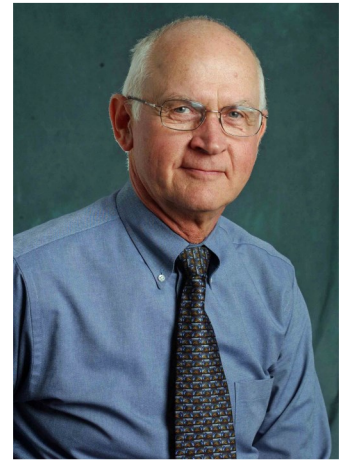
- BS, MS, & PhD, ELECTRICAL AND ELECTRONIC
- ENGINEERING
- REGISTERED PROFESSIONAL ENGINEER

SPECIALTIES AND FOCUS AREAS

- Internet-centric sciences
- Mobile communications
- Airborne intelligence, surveillance, and reconnaissance
- Air traffic control

CAREER SUMMARY

- Consultant, 2002 to present
- University of Colorado at Boulder, Adjunct Professor, 1981 to present
- DMW Worldwide, Colorado Springs, CO/Menlo Park, CA, Consultant/Member, 1996 to 2000
- BDM International, acquired by TRW/Northrop Grumman Corp., Senior Vice President, 1969 to 1979 and 1982 to 1996
- National Telecommunications and Information Administration/Institute for Telecommunications Sciences, Associate Deputy Director, 1979 to 1982
- Martin Marietta Corp. a Lockheed Martin merger, Denver, CO, Engineer, 1962 to 1969



SELECTED MEMBERSHIPS, ASSOCIATIONS, & BOARDS - CURRENT AND PAST

- Institute for Electrical and Electronic Engineers (IEEE)
- American Institute for Aeronautics and Astronautics (AIAA)
- Sigma Xi, Scientific Honorary
- Eta Kappa Nu, Engineering Honorary
- Armed Forces Communications and Electronics Association (AFCEA)
- American Society of Civil Engineers (ASCE)
- International Society for Optical Engineering (SPIE)
- Society of Cable Telecommunication Engineers (SCTE)
- Air Traffic Control Association (ATCA)
- Joint Federal Telecommunications Standards Committee, Federal Standard 1037,
- Joint Working Party, Study Group XVIII of the U.S. CCITT
- Proxy Aviation Systems, Board of Directors, 2009 to 2012
- Department of Homeland Security, Idaho National Laboratories, Board of Advisors, 2007 to 2011
- TKC Technology Solutions, a Native Alaska Corp, Member, Management Council, 2003 to 2009
- Collegiate Range Ventures, Littleton, CO, Technical Board of Advisors, 1998 to 2005
- Telecom Venture Capital, New York City, NY, Technical Board of Advisors, 1996 to 2004
- InnerWall Security Systems, Inc., Colorado Springs, CO, Board of Directors, 1996 to 2002

PUBLICATIONS - Book contributions and publications on request

Matt Sloane

Matt Sloane is the CEO and founder of Skyfire Consulting, a public safety focused UAV consultancy; and its parent company, Atlanta Drone Group.

Skyfire specializes in helping police, fire, and emergency management agencies complete the FAA Certificate of Authorization (COA) process, provides all of the necessary training, and helps departments select the most appropriate UAV equipment.

Before he founded Atlanta Drone Group in 2014, Matt spent 14 years in various roles at CNN in Atlanta, including 12 as a medical news producer and special projects manager for Dr. Sanjay Gupta.

In addition to his work there, he worked as a certified Emergency Medical Technician for Emory EMS, working his way up to Chief of Resources and Planning for the department.

Matt is an inaugural member of the National Fire Protection Association (NFPA) technical committee on drones and an FAA-certified pilot. He lives in Decatur, Georgia, with his wife Amanda, two-year-old son Brendan, and his Australian Shepherd, Kylie.



Benjamin Miller

UAS Pioneer and Subject Matter Expert

Ben spent the first part of his career in 15 years of distinguished service with the Mesa County Sheriff's Office. Ben was the founder and program director of the first operational UAS program in the United States for a non-federal public safety agency. During his tenure, Ben played a pivotal role with the United States Department of Justice and its coordinating effort to assist the Federal Aviation Administration with recommendations regarding the use of UAS by public safety organizations. Ben has offered guidance to other agencies across the country and continues his focus on the integration of UAS and instruction for public safety agencies in the United States.

Ben has more than 150 mission deployments and has attained factory certification on four separate unmanned aircraft systems. He's flown numerous types of unmanned missions, including tactical operations over armed gunmen, crime scene reconstruction missions, search and rescue, and fire operations. Ben also had the opportunity to train game wardens in the African nation of Namibia in support of their anti-poaching efforts.

Ben is considered a thought leader on the applications of small unmanned aircraft throughout the industry and his perspective has been shared in presentations at UAS gatherings across the United States and Canada, including testimony to the United States Senate Judiciary Committee and to other members of Congress at both the State and National level. His expertise has been sought by prestigious organizations such as NASA, the FAA's NextGen Institute, and numerous other organizations in the Unmanned Aircraft space, to include academia, industry, and government.

Ben sits on the Board of Directors for the Association of Unmanned Vehicle Systems International (AUVSI.org) and participates on committees throughout the nation, including ASTM's F38 committee on unmanned aircraft.

Ben contributes to UAS advocacy efforts on policy activity at both the state and federal levels.

Ben now works for Draganfly Innovations, original creator of the "quad" drone.

Ben is the recipient of both the Mesa County Sheriff's 2011 Excellence Award and the 2012 AUVSI Member of the Year award.



Sheriff Shayne Heap

Sheriff Heap is a Colorado native and has dedicated the majority of his professional life to enhancing public safety in Elbert County and throughout the State of Colorado. Shayne attended High School in Steamboat Springs and graduated from Aurora Christian Academy in Aurora. He went on to further his education at Colorado Mesa University in Grand Junction and CU Denver. Sheriff Heap graduated from the Highlands Ranch Law Enforcement Academy and began working as a detentions deputy with the Elbert County Sheriff's Office. He worked his way up the ranks serving as a Detentions Sergeant, Patrol Deputy, Patrol Sergeant, Patrol Commander, Undersheriff (Chief of Operations) and was elected as the Elbert County Sheriff in 2010 and again in 2014, where he is currently serving his second term. Sheriff Heap was appointed by the Governor to sit on the board of Directors for the Colorado POST (Peace Officer Standards and Training Board) and was also appointed by the Governor to sit on the board of Directors for the Colorado Court Security Commission. This year Sheriff Heap was elected as the 2nd Vice President of the County Sheriffs of Colorado.

Professional Experience

- State of Colorado – POST Certified Level 1 Peace Officer
- Member United States Deputy Sheriff's Association
- Member Western States Sheriff's Association
- Member National Sheriff's Association
- Executive Member County Sheriffs of Colorado
- Executive Member Elizabeth C-1 School Safety Board
- Member Elbert County Communications Authority
- Member Eastern Plains Law Enforcement Association
- Graduate Special Weapons Tactics Operators – (SOIC) Air Force Academy
- Certified Instructor: Taser, Intoxilyzer, OC Aerosol, Arrest Control, Distraction Devices, Chemical Munitions, Less Lethal Launching Platforms and Ordnance
- Licensed Remote Pilot through Department of Transportation Federal Aviation Administration



Awards and Recognitions:

- Awarded – Medal of Valor (X2), Medal of Merit, Life Saving Medal (X3)
- Awarded Deputy of the Year and Outstanding Employee of the Year
- Recognized by the EPA for dedicated professionalism during joint operation
- Recognized by Douglas County Sheriff's Office for negotiation with barricaded gunman during joint operation
- Recognized by Elizabeth School District for contributions and assistance to the educational community
- Recognized by the Limon Police Department for tactical management of an officer-involved shooting and barricaded gunman joint operation
- Named "Best Boss" by Colorado Community Newspapers 2015 & 2016

Shayne believes in leading with justice, mercy, and humility (Mic 6:8) and knows that law enforcement is a peacekeeping role that carries heavy but rewarding responsibilities.

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[illegible]

sUAS Solutions for Public Safety Applications

Aeryon Labs is the premier manufacturer of small Unmanned Aerial Systems (sUAS) which are at the center of major world events and international media stories. The company is the trusted partner of civil and military customers, resellers, and other commercial business partners around the globe. Aeryon Labs is headquartered in Waterloo, Ontario, Canada. Field-tested and mission-proven, Aeryon sUAS set the standard for immediate aerial intelligence gathering by anyone, anywhere, anytime, for a wide range of military, public safety and commercial applications

AeryonLive Video & Telemetry



AeryonLive Video & Telemetry is an integrated solution that streams live, low-latency video and aircraft telemetry from the Aeryon SkyRanger sUAS or any Lightbridge supported DJI system across a secure, reliable bonded cellular network connection.

AeryonLive gets the right data to the right people, at the right time, enabling prompt and accurate decision making. For public safety organizations, this means saving time, money or even lives.

Fire Service and Law Enforcement

The chief and other decision-makers can:

- View from anywhere – home, office, situation room, etc.
- Ensure global, real-time communication and collaboration
- Enable tactical and/or situational planning
- Keep ground teams at a safe distance until a plan is in place

Emergency & Disaster Response

In a disaster situation (earthquake, hurricane, ice storm, etc.) the response team can:

- Assess damage and give real-time direction on repairs and priorities
- Distribute video to all stakeholders to assist with decision-making process
- Replace helicopter and satellite data

Search and Rescue

When time is the most critical factor, response teams can:

- Stream video to the command center to provide more eyes on scene
- Share real-time information to allocate resources in the right location – faster
- Define and/or expand the search area

Aeryon Labs Inc.

575 Kumpf Drive
Waterloo, ON, N2V 1K3
Phone: 602-883-8287
info@aeryon.com

sUAS Solutions for Public Safety Applications

Aeryon sUAS



Product details

- Weight: 5.3 lbs
- Payloads:
 - Dual EO/IR
 - 30x optical zoom
- Wind tolerance:
 - 40 mph (sustained)
 - 55 mph (gusts)
- Temperature: -22°F to 122°F

For fire, first responders and law enforcement teams, and investigators, high quality aerial imagery and data can provide the real-time intelligence needed to assess the situation immediately, make informed decisions, and ensure that the evidence and data can be analyzed onsite and back in the office. Aeryon sUAS are integrated solutions that can be deployed within minutes and offer unmatched ease-of-use, reliability in extreme weather, flight and wind performance – delivering precise and immediate results that are not possible with other unmanned or manned aerial systems.

Suitable for a range of fire and emergency response applications, Aeryon sUAS provide:

- Single operator transport and deployment, no launch or recovery equipment
- Intuitive touchscreen navigation and flight planning, advanced features and automated failsafes
- The ability to fly at night, in rain and snow
- Low latency, live video & telemetry to ground teams and command centre regardless of geographic location

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Aeryon Labs Inc.

575 Kumpf Drive
Waterloo, ON, N2V 1K3
Phone: 602-883-8287
info@aeryon.com

PUBLIC SAFETY



Easy to Use

The SwiftResponder is a hand launched aircraft that will fly a programed flight path for a visual or mapping mission and then automatically return for a fully automated landing. It is capable of being manually controlled with the RC handset if desired, however this is generally only reserved as an emergency backup system. The result is an aircraft system that can be easily learned in a few hours and mastered with a few days practice.



SwiftResponder

The Right sUAS for your Needs

Although an aircraft and three sets of eyeballs is often the best solution for a search and rescue mission or a FEMA mapping mission, there are instances whereby the manned aircraft solution isn't viable. These instances usually involve weather and costs. After a hurricane or other flood producing event, clouds and adverse weather can prevent an aircraft from flying for days. In that situation, a UAS flying at 400 feet can often provide the initial evaluation a customer needs to get the first picture of the situation. A mountain road rockslide and the initial phases of a lost hiker search are not usually considered sufficient to authorize the costs associated with sending an aircraft aloft. However, due to the small area needing to be initially searched or photographed, an airborne asset such as a UAS with minimal operational costs can provide significant benefits.

The SwiftResponder UAS is based on BST's successful fixed-wing survey aircraft. It has been used for many commercial applications including performing 3D surveying, agriculture, and land management. The SwiftResponder utilizes the same system except with the added EO/IR video system for the search and rescue mission. The autonomy and reliability of this UAS have allowed BST's commercial customers to begin operations with about only a half day of training.





Specifications



Hardware

Camera:	EO and IR Options
Field tripod:	Included
R/C handset (for manual backup):	6-channel transmitter
Aircraft battery:	14000 mAH LiPo
Battery charger:	Performance LiPo charger
Toolkit:	Included

Operations

Mission length:	90 Minutes
Area covered:	900 Acres
SwiftStation mass:	2 lbs.
SwiftStation run time:	4+ hours
Gross Takeoff Weight (GTOW):	6 lbs.
User Interface:	Intuitive gesture based controls

Ensuring your Success

Black Swift Technologies' team represents over 40 years of collective UAS systems experience including hundreds of deployments using many different systems. We've worked in extreme environments including the arctic, during tornadic storms and at high altitudes. Black Swift Technologies professionals can help you integrate an efficient system combining the right airframe and sensor suite with our flight management system. The aerospace engineers of Black Swift Technologies works closely with the FAA, and are familiar with the process required to operate UAS safely within the national airspace.



CompassDrone

COMPLETE – INCIDENT - RECOVERY RESPONSE – UNMANNED - SOLUTION

CompassHoldings has been working with the GeoSpatial community for 22 years. The organization is composed of Certified Professorial Land Surveyors, Certified Photogrammetrist, GIS professionals, Aerial Imagery Pilots, and Accuracy Validation Control Freaks. Our FAA DO 200 and ISO certification mapping products provide authoritative solutions for the aeronautics industry.

The CIRRUS kit includes the key elements to a successful UAS public safety organization.

- Reliable - Supported Hardware Equipment
- Training and Certification on Operations and Image Analysis
- Standard Operational and Maintenance Procedures

Participation in the CIRRUS program will result in an organization having the UAS skill sets for safe, accurate, repeatable aerial data collection. Additional benefits include increased safety of personnel, aerial situational awareness, and an incident tactical advantage.

CompassDrone

7074 S. Revere Parkway
Centennial, CO 80112
Phone: (800) 728-5066
solutions@compassdrone.com

CIRRUS PACKAGE – HARDWARE



CIRRUS HARDWARE PACKAGE PARTNERSHIP

CompassDrone



THE FUTURE OF POSSIBLE



DJI Hardware:

- (3) Inspire 1 V2.0
- DJI Care 1 Yr. Plan
- (4) Inspire 1 TB48 Battery per AirFrame System
- Battery Heater
- 180W Charger w/Part 4 180W AC Power Adaptor Cable (US/Canada)
- Battery Changing Hub
- 1345T Quick-Release Propeller (extra set)
- PI-750 Instant Power DC to AC Power Inverter - 750 Watts
- (2) RC Lipo Safety Bag/Lipo Guard Bag for Charging Large 235*65*180mm (fits 2 Inspire batteries)

Accessories:

- DJI Osmo Mobile Collection
- Trimble TDC100 Data Collector
- Protective Hard Transport Cases
- Visual Reference Scale Sticks

CompassDrone

Successful UAS Public Safety Program

CIRRUS PACKAGE SOFTWARE / TRAINING



CIRRUS SOFTWARE & TRAINING PARTNERSHIP

CompassDrone™



Training:

- Part 107 Flight Operation and Controls
- Night Operations Application Process
- AIRS Data Collection Standard Operating Guidelines
- AIRS Accident Analysis

Processing and Data Collection Software:

- CompassMapper & CompassDrone
- DroneDeploy (Unlimited Image Processing)

The CIRRUS program goal is to establish an intimate working relationship with public safety agencies. By providing the Hardware/ Software support in conjunction with training our package represents a complete UAS solution.

Our offering and support of the components within this kit are all industry leading solutions independently. By combining each element the final combination has real program model to ensure operation success.

Current Use:

The Elbert County Sheriff's Office in collaboration with the AIRs accident reconstruction training school is currently using the CIRRUS Hardware and Software to process aerial imagery for Public Safety applications.

CompassDrone

7074 S. Revere Parkway
Centennial, CO 80112
Phone: (800) 728-5066
solutions@compassdrone.com

We don't have the iconic garage similar to the Hewlett Packard story, but in many ways our beginning mirrors that of Steve Jobs, Bill Gates, and countless other entrepreneurs.

Like many businesses, it started with a dream, with a vision, and the guts to make a go of it. In 1998, Christine and Zenon Dragan launched Draganfly Innovations Inc. From the start Zenon Dragan said, "I like to create things that haven't been done before", and that couldn't be more true with the first introduction of the RC blimp, and most notably, the 1999 development of the RC quad rotor helicopter called the Draganflyer.

And from there numerous awards, ultimately making history in 2013 when a Draganflyer X4-P system was the first sUAS system flown by a public safety agency to save a life and recognized by the Smithsonian National Air and Space Museum.

Draganfly Innovations

2108 St. George Avenue
Saskatoon, SK,
Canada, S7M0K7
Phone: (800) 979-9794
International: (306) 955-9907
WEBSITE: www.draganfly.com
E-mail: ben.miller@draganfly.com

Draganfly Innovations

Practical Public Safety sUAS Solutions

Draganflyer Commander



Product details:

- Packages from \$22,995 - \$39,995
- Weight: 6 pounds
- Flight times from 25min to 32min
- Payloads feature quick release
 - Sony QX100
 - Sony RX100
 - FLIR VUE Pro
 - SureFire Search Light
 - Dual FLIR / Sony QX100

Draganflyer Commander features a patented folding carbon fiber airframe, quick release payloads, and dual battery system for redundancy and increased flight times.

The Commander is ideal for public safety applications because it's one of the most practical solutions on the market. Practical in the sense that it can be easily transported in a pelican case, optional high quality 511 backpack, and in less than two minutes, assembled and in the air.

The aircraft features a robust autopilot system, is easy to operate, and is designed around a patented folding carbon fiber airframe. Practical, durable, reliable, and quick to get on station with an array of powerful quick release payloads.

Payloads that deliver high resolution Decision Quality Data (DQD) through color video, still images, FLIR thermal video, or a combined FLIR/Color dual payload system. A dual payload which provides simultaneous viewing of both cameras over a digital video network to multiple computers, tablets, or handheld devices.

Payloads that provide the ability to light up a crime scene using a powerful SureFire high intensity spotlight combined with live video to even further enhance aerial night operations.

No matter what the mission - whether it's tactical, crime scene 3D modeling, or SAR, Draganfly provides a robust solution that delivers results.

Draganfly Innovations

Practical Public Safety sUAS Solutions

Draganflyer Commander



Draganflyer Commander
5.11 Backpack



Example High Resolution
Quick Release Payload

Our focus is designing and building some of the most practical aerial solutions in the industry. Adding value to your agency means the solution must be easy to use, easy to transport, reliable, quick to get airborne, and deliver high quality results.

We've been in this business for 19 years and we've learned a great deal along the way. Some people compare products by looking at spec sheets but there is so much more to selecting a solution, or selecting a company. We encourage you to look further, to examine the culture and values behind a company like Draganfly Innovations.



Reliable solutions provide amazing results. It's a challenge in just a few words to explain the immediate benefit of aerial 3D point cloud modeling. Illustrated is a point cloud model of a simulated car/bicycle collision. The aerial photos of the scene, captured in just 15 minutes of flying, were used to build the model with Pix4D accurate to 1cm and can be viewed from any angle or altitude. Please contact us to learn more about the company, our culture, our amazing solutions, and people behind it all.



Major Milestones

Small sample of agencies and major accomplishments operating aerial solutions from Draganfly Innovations Inc.



Royal Canadian Mounted Police

Draganfly is known to be the world's first sUAS to save a life, flown by the RCMP (2013). The Draganflyer system was equipped with a FLIR thermal imaging camera and digital video downlink system to locate a seriously injured driver. This event was so critical to the industry, Draganfly was inducted into the Smithsonian National Air and Space Museum.



Mesa County Sheriffs Office Colorado

One of the first U.S. law enforcement agencies to implement a successful sUAS program and obtain an FAA Certificate of Authorization (COA) in 2008 later expanded to cover the county.



Saskatoon Police Service

One of the first agencies in North America operating a Draganflyer drone (2004). In 2011, Saskatoon Police Service were the world's first agency to fly an sUAS to document a manned aircraft crash within city limits using this powerful aerial solution.

Draganfly Innovations

2108 St. George Avenue
Saskatoon, SK,
Canada, S7M0K7
Phone: (800) 979-9794
International: (306) 955-9907
WEBSITE: www.draganfly.com
E-mail: ben.miller@draganfly.com



Eye In The Sky Unmanned Aerial Systems (EITS UAS).

The expansion into the Unmanned Aerial Systems market allows for diversification into this rapidly growing market.

Since 2014, our unmanned professionals have been exploring this market by evaluating its potential opportunities and has worked to establish subject matter expertise. The decision was made to focus on four key areas... Emergency Management/First Responders, Infrastructure Inspection, Counter UAS, and Training. EITS UAS has been actively working with several of the established UAS Test Sites, state/local government, academia and industry in the advancement of these goals.

Eye In The Sky UAS

Leach Airport
County Road 53 & County Road,
Center, CO 81125
Phone: (443) 928-6206
Rinaldo@EyeInTheSkyUAS.com



Product Name



Product details here

- Under 10K (2-Birds)
- Weight 320 grams
- 3 Standard Cameras
- Payload 450 grams
 - All Weather UAS
 - Interchangeable

The Eye In The Sky UAS InstantEye Mobile Training Team (MTT) is operated by Special Operations and Intelligence professionals with over 50 years of experience in worldwide missions. MTT's mission is to provide our clients with the highest quality training, service, and equipment available in response to client needs.

Eye In The Sky UAS will develop realistic and customized training scenarios with the client to provide useful flight mission training as they would typically experience in the field.

We provide cost effective, innovative solutions to our clients in order to improve the operational effectiveness of DoD, law enforcement, first responders and commercial customers. This is accomplished by providing relevant subject matter expertise, a passionate commitment to the customer's mission, and an unwavering dedication to quality in contract performance in our core competencies: Tactical Employment Training, Emergency Response and Natural Disasters, Urban and Rural Operations, and Search and Rescue.

Public Safety Entities Supported:

Lyon County Search and Rescue (Nevada)
Lyon County Sheriff Department (Nevada)
Alamosa County Sheriff Department (Colorado)



UAS Colorado is a non-profit business league, committed to promoting and improving the aerospace industry in Colorado, particularly supporting the safe integration and use of unmanned aircraft systems throughout the state for the benefit of the public.

- Provide organizational structure and support for UAS professionals
- Support the application for an FAA-designated UAS test site in Colorado
- Provide an industry forum for discussions, events, meetings and professional contacts
- Advocate for public policy that supports UAS industry development in Colorado
- Create an industry identity for UAS in Colorado
- Promote the safe, professional operation of UAS sites in Colorado
- Conduct public awareness and public relations campaigns to help the general public understand the use and importance of UAS in Colorado



FLYMOTION

Unmanned Systems

Flymotionus.com

DJI Enterprise Dealer

Public Safety Drones
(UAS) – Protecting Life is
Always A Priority

Our training and operations staff has over 25 years of combined first-hand tactical operations experience. We understand the needs of Law Enforcement, EMS, Fire, and First-Responder public safety operations from our own professional experiences. This first-hand insight allows us to develop the programs, systems, and provide the training that your team needs to operate unmanned systems. From system selection, advanced piloting instruction to tactical flight ops, our team of experts bring the systems and training your agency needs. drone operations.

FLYMOTION **Unmanned Systems.**

4558 Eagle Falls Pl.
Tampa, FL 33619 -9611
Phone: (800) 548-5844
info@flymotionus.com



-UAV Sales/Support

-Mobile UAS Command Centers

-Consulting

-Training

FLYMOTION Unmanned Systems is a premier UAS solution provider and unmanned integrator that prides itself on being a one-stop-shop for public safety agencies. Whether you need help choosing the best UAS for your operations, learning the correct use of the systems, or even building mobile command centers for UAS operations; FLYMOTION is the place to go.

FLYMOTION looks at every department on a case by case basis, understanding operational needs and tailoring the systems to that use. We offer consultation services to departments looking into UAS so they can better understand the field they are moving into.

Our vast network of resources and contacts as well as our years of experience in public safety and UAS allows us to provide you with any answer you need in regards to UAS. If you can't find a solution that meets your needs, chances are we have one in mind or can develop a custom solution for you.

Feel free to contact us for any questions you have about UAS, mobile drone command centers, program development, or anything else related to UAS.

Contact us to Order today! info@flymotionus.com



The Zenmuse XT FLIR Infrared camera is a great addition any public safety UAS. It allows for night operations as well as search and rescue in areas that you may not be able to easily identify a subject.

The brand new DJI M210 features a weather resistant airframe that can carry two sensors at a time. This will greatly improve operations where the need exists to run thermal imaging and zoom cameras simultaneously.

A 35 minute flight time also improves the overall performance of the UAS as it was designed specifically for enterprise markets.

Multiple sensor payloads can be adapted to this airframe; Z30, X5S, X4S, and FLIR XT are current options with more to come in the future.

The Zenmuse Z30 camera provides a new level of detail to traditional drone operations. The 30x optical zoom allows for observation from great distances. Designed for industrial use to inspect cell towers, this camera has been repurposed to serve the public safety community as an amazing overwatch tool.





Leptron UAS, Inc.

The path towards developing a UAS (or UAV, Drone) program begins here.

Since 2009, Leptron UAS, Inc. has designed and manufactured commercial and military-grade unmanned aircraft systems (UAS) that have attracted the attention of law enforcement and emergency management agencies nationwide.

Services:

- Commercial-Grade UAS
- UAS Flight Training
- Part 107 Certification
- FAA COA Filing



RDASS HD

RDASS Product Summary

- Starting at \$8,995.00
- Weight – 7lbs
- 20 Minute Flight Time
- 1.5 lbs Payload
 - EO & IR Combo
 - MultiSpectral
 - Interchangeable

The Rapidly Deployed Aerial Surveillance System (RDASS) HD by Leptron UAS, Inc. is a professional-grade vertical takeoff and landing platform engineered for stability, versatility, and remote data collection. The RDASS HD is developed with a unique aerodynamic design and advanced electronics that maintain incredible aircraft stability even in unpredictable wind conditions. Enhanced safety features such as intelligent fault detection- automatically prompts the RDASS HD to safely return home and land in the event of lost communications, low battery, or when commanded by the pilot.

The RDASS camera mounting system accepts Leptron stabilized or fixed gimbal configurations. Each gimbal is perfectly balanced to eliminate excessive power draw caused by in-air leveling corrections. Additionally, the RDASS HD can be equipped with navigation LEDs, remote video viewing, and a ground control station. With dozens of user defined system configurations available, the RDASS HD is an ideal choice for industry professionals.

Leptron UAS, Inc.

2650 East 40th Avenue
Denver, CO. 80205
Phone: 800-722-2800
Fax: 303-322-7242
andrewl@leptron.com

Leptron UAS, Inc.



The path towards developing a UAS (or UAV, Drone) program begins here.

Avenger Helicopter

Avenger Product Summary

- Starting at \$65,000
- Weight – 16 lbs
- 60 Minute Flight Time
- 10 LBS Payload
 - Multiple Remote Sensors
 - Interchangeable



The Avenger™ helicopter is a efficient high-performance platform for high or low altitude surveillance, photography and sensor deployment. The Avenger offers a fully featured flight system and military grade ground station. Battery propulsion means no power loss and quiet operation with easy field charging.

Standard

- Dual GPS band (L1 and Glonass) for ultimate precision
- GPS-based flight plans with flight plan templates
- Drag and drop based ground station software
- Auto-Takeoff and Landing
- Intelligent Fault - Lost communication with Return Home
- Max and Min altitudes and custom controlled flight logic
- Dual Flight Mode – The ability to use either a wireless controller or a GPS-based ground station
- Full GPS Mode or No GPS Hold Mode
- Laser Altimeter

Upgrades

- Dual GPS
- RTK
- Terrain Following
- Ground Station Following
- Autopilot IMU/Integration
- Payload Camera Integration

Since 2009, Leptron UAS, Inc. has designed and manufactured commercial and military-grade unmanned aircraft systems (UAS) that have attracted the attention of law enforcement and emergency management agencies nationwide.

Many of Leptron's product development efforts have rooted from suggestions from our customers. Leptron's focus is to offer high quality products for practical and tactical applications.

Leptron is grateful to have assisted dozens of public agencies with developing their UAV programs. Some of which include:

- Arlington PD
- Austin RED Team
- Golden PD
- Laredo PD
- Utah State Patrol
- Michigan State
- Union County PD
- Guernsey County
- Riverdale PD
- NJ Collective

Leptron UAS, Inc.

Street Address
Address 2
City, ST ZIP Code
Phone: (725) 555-0125
Fax: (725) 555-0145
E-mail address



Multicopter Warehouse ® is a Tier 1 Authorized Dealer and Distributor for major UAS manufacturers of multicopters, parts and accessories. We specialize in UAS technologies utilized for many applications such as Search & Rescue, Crime Scene Investigation, Agriculture, GIS Mapping, Utility Inspection, and Professional Cinema Aerial Photography. Additionally, we design, develop and fabricate custom parts and accessories and do all repairs in-house based on our clients needs.

Multicopter Warehouse ® is also one of the few Authorized DJI Consumer, Industrial, and Enterprise Dealers in the United States carrying the Zenmuse XT, Z30 and other industrial related products.

Multicopter Warehouse

399 Perry St #100
Castle Rock, CO 80104
Phone: (303) 552-2300
info@multicopterwarehouse.com
http://multicopterwarehouse.com

Multicopter Warehouse

JOIN THE AERIAL REVOLUTION

DJI Matrice 600 Pro



Product details here

- \$4,999
- 21lbs
- Up to 35 minutes
- Up to 12lbs
 - Multiple Cameras
 - Thermal Options

The Matrice 600 Pro (M600 Pro) inherits everything from the M600 with improved flight performance and better loading capacity. Pre-installed arms and antennas reduce time required for setup, and the system's modular design makes it easy to mount additional modules.

The airframe is equipped with the latest DJI technologies, including the A3 Pro flight controller, Lightbridge 2 HD transmission system, Intelligent Batteries and Battery Management system. All Zenmuse cameras and gimbals are natively compatible and full integration with third party software and hardware make the M600 Pro ideal for professional aerial photography and industrial applications.

Fire Fighters and Law Enforcement appreciate the long flight times and multiple camera options including the Zenmuse Z30 with 30x optical zoom and the Zenmuse XT thermal camera.

The live video feed can be sent to a command vehicle using either the HDMI or SDI output on the remote control.

With a flight range of up to 3.1 miles, there is almost nothing out of the reach of the Matrice 600 Pro.

Multicopter Warehouse

JOIN THE AERIAL REVOLUTION

DJI XT Thermal System



Product details here

- \$5998 - \$998
- 270g
- Flight Time
- Multiple Color Palletes
- Digital Zoom

Thermal imaging from the air has never been as easy as it is with the DJI Zenmuse XT. By combining DJI's unrivaled expertise in gimbal technology and image transmission with the industry leading thermal imaging technology of FLIR, the Zenmuse XT is the ultimate solution for rapid and reliable aerial thermal imaging. Capture faster, with pinpoint precision, over large areas, then save them for analysis and reporting.

Multicopter Warehouse® is one of the very few Authorized DJI Consumer, Enterprise and Industrial Application Dealers in the USA. We offer the best prices around and will happily price match and beat our competition. We are also happy to offer discounts to Law Enforcement, Emergency Service Organizations, Government and Educational Institutions and other qualifying organizations. Additionally, we have paired up with one of the largest equipment finance companies in the US to offer flexible financing options to our customers. Our staff is comprised of certified thermographers that will happily recommend the best equipment for your application.



**MULTICOPTER
WAREHOUSE**

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<http://multicopterwarehouse.com>



Petauro Systems

Your Team Taking Flight™

Petauro Systems was founded in 2016 with the mission of supporting first responders, sworn or civilian, who plan to fly small UAS on behalf of their agency. As public agencies, safety, accountability and transparency are of utmost importance.

Do the Right Thing

We help your team make informed choices about aircraft, potential uses and the feasibility of a UAS program given the airspace you intend to operate in, your team's objectives and budget.

Operate the Right Way

We strongly advocate for the proper and legal use of UAS in compliance with all applicable federal regulations. We want your program to be legal, efficient and transparent with mentorship that is honest and timely.

Do it for the Right Reasons

We, too, are first responders. We want to do what we can to make your team effective and safe. That way, you can do what is most important – keep your community safe.

Petauro Systems

155 E Boardwalk Drive #515
Fort Collins, CO 80525
Phone: (970) 232-3075
Fax: (970) 232-3101

www.petaurosystems.com

Training. Mentorship. Resources.



Petauro Systems™ Public Safety Remote Pilot

Petauro Systems™ Public Safety Remote Pilot is intended for all first responders who will be operating unmanned aircraft systems (UAS) in support of law enforcement, firefighting or search and rescue applications. The course teaches students how to configure, maintain and operate their UAS and meets FAA regulations for aircraft specific training.

Public safety remote pilots need to be capable of operating a UAS for multiple types of missions. This foundational course gives students the core knowledge they need for planning and conducting flights. Topics include capturing scene imagery and video, Forensic Aerial Mapping™, incident over watch and open area searches.

Students will learn how to safely operate a UAS in the field after completing an airspace review, risk assessment, pre-flight check and safety briefing. Forms and checklists remote pilots can use in establishing operating procedures are included. Additionally, students will learn best practices for record keeping, flight crew responsibilities and data management.

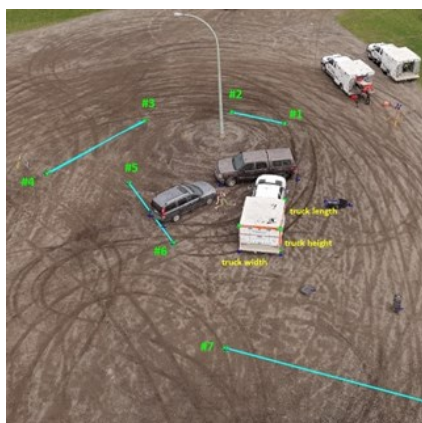
This 5-day course includes extensive hands-on experience and is suitable for students with any level of UAS experience.

Petauro Systems



Your Team Taking Flight™

Training. Mentorship. Resources.



Petauro Systems™ Forensic Aerial Mapping™ and 3D Modeling

Petauro Systems™ Forensic Aerial Mapping™ and 3D Modeling is intended for all law enforcement and firefighter investigators who need to take accurate measurements and create diagrams and maps. The course teaches students how to use aerial and terrestrial images to create point clouds, 3D models and orthomosaic images using either Pix4D Mapper or PhotoModeler UAS software.

- History and theory of photogrammetry
- Case law and validation testing
- Understanding altitude, camera sensors and ground sample distance
- EXIF data, geotags and geo-referencing
- Converting coordinate systems and generating X,Y,Z point lists
- Establishing ground control
- Using manual tie points and check points
- Creating scale diagrams and maps from images
- Point cloud creation, densification, merging and cropping
- Digital elevation models and dense surface models
- Introduction to orthomosaic and 3D model animation

This 3-day course is for students with any level of UAS experience.

Our experience in Forensic Aerial Mapping™ comes from years of research and validation testing:

National Institute of Justice Cooperative Research:

‘Using Airborne Photogrammetry from small UAS to Enable Faster Traffic Incident Clearance.’

NIJ 2013-IJ-CX-K008

Society of Automotive Engineers Technical Paper:

‘Accuracy of SUAS Photogrammetry for Use in Accident Scene Diagramming.’ SAE Paper 2015-01-1426

Partner Agency Validation Testing:

Fort Collins Police Services

Las Vegas Metro Police
Dept Larimer County UAS
Team

Let us teach you what we have learned and help you harness the power of your UAS. We are always looking for agency partners who want to learn and grow

Petauro Systems

155 E Boardwalk Drive #515
Fort Collins, CO 80525
Phone: (970) 232-3075
Fax: (970) 232-3101

www.petaurosistemas.com

Drones on a Mission

DJI Matrice 210



Matrice 210:

- **\$8999**
- Dual Camera
- Daylight, FLIR, Zoom
- Obstacle Avoidance
- Weather Resistant

Skyfire Consulting is a public-safety focused UAV consulting company, specializing in FAA Certificate of Authorizations, on-site UAV training, specialized equipment, policies and procedures and emergency response.

Staffed by FAA-certified manned aircraft pilots and flight instructors and current and former public safety professionals, Skyfire is able to give you the best information out there.

With more public agency COAs in the FAA pipeline than any other consulting firm, our relationship with the FAA speaks for itself.

Get results, quickly and professionally from Skyfire's public safety experts.

The Matrice 200/210 series is a best-in-class, industrial aircraft, rated for anything you can throw it.

Featuring IP43 weather protection, redundant battery systems, obstacle avoidance and detection, ADS-B transponder and the latest streaming technology from the world's most reliable drone manufacturer.

The Matrice 210 also adds the capability of using dual cameras - any combination of daylight, zoom and thermal - to deliver the imaging you need, when you need it.

The airframe also allows for one top-mounted camera, to be used for structural inspections, and a front-facing FPV camera for situational awareness.

Optional RTK GPS capability gives you centimeter accurate position data.

Also features folding arms and an included case, to make the Matrice 200 series the best public safety UAV platform on the market today.

Skyfire Consulting

120 North Candler Street
Suite 17
Decatur, GA 30030
Phone: (404) 220-7783
SkyfireConsulting.com
info@SkyfireConsulting.com

Drones on a Mission

Zenmuse XT Powered by FLIR

ZENMUSE XT
Powered by 



Zenmuse XT By FLIR:

- \$5,700 - \$14,000
- Multiple Color Palettes
- Digital Zoom
- Isotherm Mode
- Radiometric Capability

The Zenmuse XT camera, powered by FLIR, was designed from the ground up for aerial applications.

With 32 different configurations, including various resolutions, frame rates, lens options, and radiometric capabilities, there is an XT camera right for your needs.

Featuring more than a dozen different color palettes for different applications, the XT allows you to choose the right scheme for daytime, nighttime, search and rescue, wildlife detection and more.

The camera features 4x - 8x digital zoom, depending on which model you choose, and has an Isotherm mode for detecting only thermal signatures within a specific temperature range.

This product fully integrates into the DJI environment, making thermal imaging within the DJI suite of smartphone apps seamless, and allows for both on-board and in-app recording, panning, tilting and zooming.

There simply is no better choice for aerial thermal imaging than the Zenmuse XT camera.

From small, rural departments to large metro city departments and everything in between, Skyfire has a proven track record helping public safety agencies get approved and flying UAVs.

Our notable clients include Menlo Park and Fremont California Fire Departments, Delaware County Pennsylvania Emergency Management Agency, Morris County New Jersey Emergency Management, Dekalb County Georgia Department of Public Safety, and 8 different police and fire clients in and around Indianapolis, among others.

Skyfire's expertise has helped over 30 agencies obtain FAA Certificates of Authorization, and trained hundreds of police and firefighters in UAV tactics and operation.

Skyfire Consulting

120 North Candler Street
Suite 17
Decatur, GA 30030
Phone: (404) 220-7783
SkyfireConsulting.com
info@SkyfireConsulting.com



Spectrabotics™

Public safety is all about awareness and communication. We help you visualize the environment and all its moving parts, integrate the numerous sensors and data collection systems responding to an event, and analyze that data for decision-making at all levels.

Spectrabotics is a geospatial data analytics company determined to change how the world sees data. Our data-engine is simple to use and ever-expanding as new sensor data, and analytic ideas emerge...to make better decisions.

We give you the tools to ingest, analyze, fuse, and present almost any sensor data in real time, from your data stores and around the Web.

Spectralink™ fuses data from multiple sources into a decision-making platform that tracks objects, manages information, a complete and accurate picture of the environment and enables access to or sharing of information without the need for additional licenses.

Founded in 2013, Spectrabotics got its start working with Unmanned Aerial Systems and the immense amount of data they collect. Seeing a need for a better data analysis system that can take full advantage of the spatial, spectral, and temporal resolutions the drones provide, we built a cloud-based geospatial information and data analytic powerhouse able to ingest virtually any sensor data for a more complete and accurate picture of the environment.

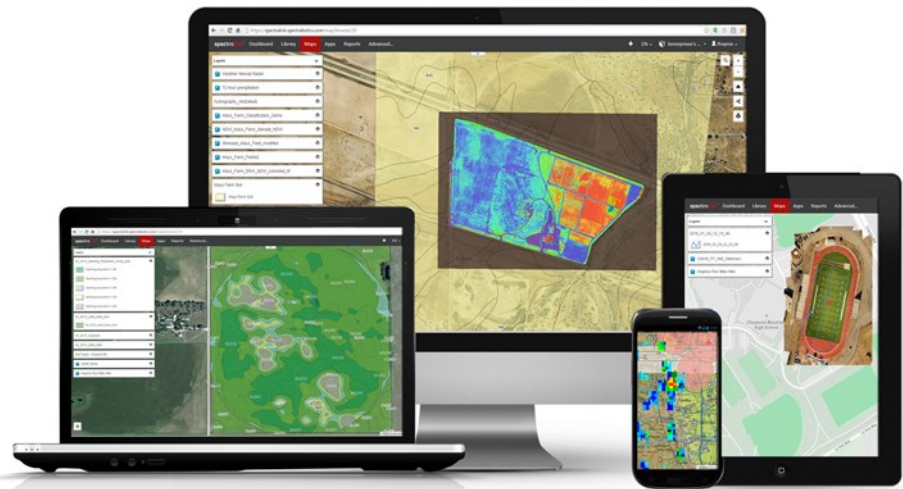
Spectrabotics

2993 Broadmoor Valley Road
Suite 103
Colorado Springs, CO 80903
Phone: (719) 428-1590
info@spectrabotics.com

Sensors | Data | Decisions



Spectralink™



Do MORE with Your DATA

Our data management, analysis, and visualization capabilities will streamline your operations, reduce your costs, and improve the awareness picture you present to your teams.

- **Access to Any Imagery Data:** Upload any geo-referenced image from individual scenes to large mosaics. We've solved sharing your data as you send links to your customers, not large image files!
- **Import Sensor Data Feeds:** Have access to real-time sensors and need to view locations data? Say you want to analyze the data in real-time. Spectralink does that!
- **Import Live Data Feeds:** You can connect your maps and applications to many data sources around the web such as IoT platform services, weather feeds, and video cameras sending their data to the web.
- **Customize Data Analytics:** Achieve deeper learning by fusing your sensors, data feeds, and real-time telemetry.



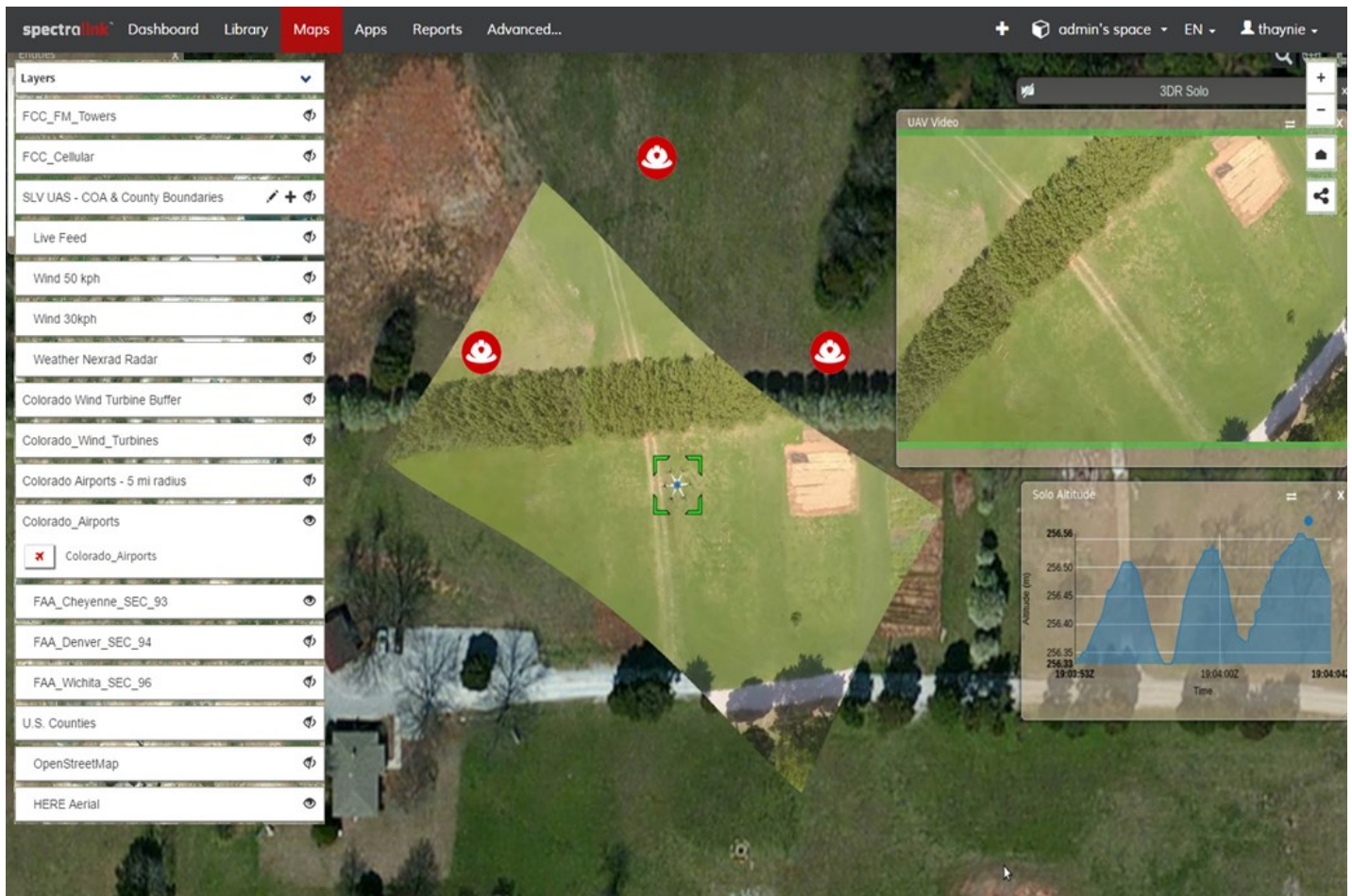
Better Decisions Save Lives, Property, and Resources!

Spectralink™

Information Presented Your Way!

- **Collect your data:** Add available data (historical, current, and real-time).
- **Manipulate your data:** Organize and analyze to answer your questions – *what has changed, what is happening now, and what can I expect to happen.*
- **Share your information:** Disseminate the information to those that need it to make decisions and generate actions plans.

**Safely
Monitor
Your
Assets**



www.spectrabotics.com (719) 428-1590 info@spectrabotics.com
COLORADO SPRINGS, COLORADO



From Fire and Rescue to the Coast Guard and Law Enforcement, we believe a view from above will help first responders overcome obstacles and make us safer. Our humble beginnings began with innovation and accessibility in the aircraft industry. From first commercially successful ready-to-fly fixed wing RC airplane, to ground-breaking commercially successful electric aircraft and next generation aerial video solutions, Yuneec has pushed the limits above and beyond in electric aviation for over 15 years.

Safety features such as Intel's RealSense™, six motors, and retractable landing gear, our systems are safe and ready for rapid-deploy scenarios.

Yuneec: bringing safety and security to new heights.

5555 Ontario Mills Pkwy
Ontario, CA 91764
Phone: (855) 284-8888
CommercialSales@yuneecusa.com



AERIAL INNOVATION THROUGH RESEARCH AND TECHNOLOGY



PRODUCT DETAILS

- Six rotor safety
- Optional Payload Solutions
- Hot swap camera platforms
- 360° Rotation on camera
- Hot swap camera platforms
- Instant review of footage taken
- Retractable landing gear
- Instant review of video/data capture

Tactical operations may be the most dangerous aspect of law enforcement work, with barricades, hostile crowds, hostage situations, active shooters, or raids. An aerial observer allows officers to see around corners and offers greater situational awareness without risking assets.

Law Enforcement organizations have broad requirements for sUAS systems, used as "eyes in the sky" for crowd control, active shooter scenarios, intelligence-gathering, or monitoring of targeted areas. Accident Scene Reconstruction allows Law Enforcement officers to quickly record an accident scene in 2D or 3D, for later assembly of data for court appearances, reporting, or archiving. Coupled with tools such as PhotoModeler® or Pix4D®, accident scenes may be rapidly captured and cleared, saving time, cost, and officer resources.

Our six-motor sUAS systems are more quiet than typical systems, allowing for quiet hover/loiter while multicasting video and telemetry information to a tactical control center or observer post that allows for concise communication. The live video feed may be shared out to officers, command posts, or other relevant parties for real-time visualization, regardless of which imaging payload is being flown. Mission Planning also allows agencies to plan and execute a moving flight path for constant surveillance.

Value-Added Distributors also build tactical dispersion rails for H520 sUAS, allowing for controlled dispersion of various agents for crowd control, notification, and obfuscation. Quiet surveillance allows officers to understand target activity, via real-time imaging from either thermal or image-based camera systems.

H520

Flight Time: 31 minutes
Diagonal rotorbase: 20.4in (520mm)
Payload Max. Weight: 500g
Battery: LiPo 6850 mAh
Weight (with battery): 1890g
Max Rotation Rate: 90°/s
Max Ascent Speed: 5m/s

Max Descent Speed: 3m/s
RC frequency band: 2.4GHz

ST16 Ground Station

Operating System: Android
Transmission Range: Up to 1 mile (1.6km)
Video Link Resolution: HD 720p



AERIAL INNOVATION THROUGH RESEARCH AND TECHNOLOGY

H920 PLUS

PRODUCT DETAILS

- Six rotor safety
- Optional payload solutions
- 24 minute flight time
- Hot swap camera platforms
- Instant review of footage taken
- Retractable landing gear
- Google® maps for waypoint cache
- Rapid-Deployment



Law Enforcement organizations have broad requirements for sUAS systems, used as "eyes in the sky" for crowd control, active shooter scenarios, intelligence-gathering, or monitoring of targeted areas. Accident Scene Reconstruction allows Law Enforcement officers to quickly record an accident scene in 2D or 3D, for later assembly of data for court appearances, reporting, or archiving. Coupled with tools such as PhotoModeler ® or Pix4D ®, accident scenes may be rapidly captured and cleared, saving time, cost, and officer resources.

Tactical operations may be the most dangerous aspect of law enforcement work, with barricades, hostile crowds, hostage situations, active shooters, or raids. An aerial observation point allows officers to see around corners and offers greater situational awareness without risking assets.

The H920 Plus includes the ST16 Pro Ground Station operating on an Android platform with an integrated transmitter, flight controls and 7-inch screen display with a HD 720p video downlink for real-time flight footage and HDMI uplink for distribution to external monitors, command/control centers, or broadcast trucks. The refined main control system enables pilots to not only save settings but also select various mission task modes, enabling LEO fly a surveillance pattern, orbit a scene, autonomously move from multiple viewpoints, and more. Users may also instantly access video and image playback on the ST16 Pro that may be shared over a network when wifi is available.

H920+

Flight Time: 24 minutes
Diagonal rotorbase: 36.2 in (920mm)
Payload Max. Weight: 211.6 oz (6000g)
Battery: LiPo 6s 4000mah 8C
Weight (with battery): 1890g
Max Rotation Rate: 100°/S
Max Horizontal Speed: 40km/h

Max Roll Angle: 35°
RC frequency band: 2.4GHz

ST16 Pro Ground Station

Operating System: Android
Transmission Range: Up to 1 mile (1.6km)
Video Link Resolution: HD 720p



From Fire and Rescue to the Coast Guard and Law Enforcement, we believe a view from above allows first responders overcome challenges and make us safer. Our humble beginnings started with innovation and accessibility in the aircraft industry.

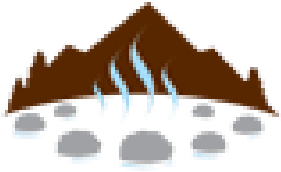
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Thanks to our Local Sponsors!



MOUNT PRINCETON

HOT SPRINGS RESORT • NATHROP COLORADO

